

Formula / concepts

1) Lr dist of (P, q) from $L(x, y) = ax + by + c = 0$

is

$$\text{Lr distance} = \frac{|L(P, q)|}{\sqrt{a^2 + b^2}} = \frac{|ap + bq + c|}{\sqrt{a^2 + b^2}}$$

2) Lr dist between 2 parallel Lines.

$$L_1: a_1x + by + c_1 = 0$$

$$L_2: a_2x + by + c_2 = 0$$

Imp. Note:

$$a_1 = a_2 \text{ \& } b_1 = b_2$$

$$\text{Lr distance} = \frac{|c_2 - c_1|}{\sqrt{a^2 + b^2}}$$